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Copy 10 of 16

6 November 1963

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MEMORANDUM FOR THE RECORD

SUBJECT: Preliminary Results of KEMPSTER Technique Analysis

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1.

and the undersigned with the preliminary results of analysis of the KEMPSTER technique.

2. Because the report will be in hand in a couple of weeks, only the outstanding items will be mentioned in this memorandum.

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3. Electron cloud rise time: reports that the computer analysis of the electron cloud rise time is at worst, 1 microsecond. Undertainties in the available data, including that, on attachment and detachment of the electron to atoms, principally neutral and excited oxygen atoms, might make the electron cloud rise time lower by a factor of 10 or specifically 0.1 microsecond. For purposes of KEMPSTER B, the pulsed version, the latter figure is the more desirable, but we could live with the former.

4. figure of 0.1 microsecond electron cloud rise time was deduced several months ago in an independent "bracketing calculation" by the undersigned.

5. Optimization of the KEMPSTER B technique by computer studies show that the pulsed electron cloud will probably be most effective between the range

NRO review(s) completed.

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6. Optimization studies also show that the most effective composition of the plasma electron cloud will be made up of about three primary electron energies, namely: 15 Kev., 50 Kev., and 200 Kev.

7. At this writing, the optimization requirements of paragraph 6, above, are believed to be readily produced by KEMPSTER B.

8. [] has been asked to send to us the price of retaining [] and his assistant, [] so that they could analyse the [] experimental results independently []

SIGNED

[]
Engineering and Analysis Division
(Special Activities)

EAD/OSA: []
Cy 1 - EAD/OSA (thru ADD/S&T)
2 - AD/OSA
3 - D/TKCH/OSA
4 - CD/OSA
5 - EAD/OSA chrono
6 - RB/OSA

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